

EXHIBIT F

Ex. F - Plaintiffs' Expert Witness K. Keyes Deposition, exhibit 10 (October 30, 2020) - SEALED

PLAINTIFFS' OPPOSITION TO DEFENDANTS' MOTION TO EXCLUDE CERTAIN
EXPERT TESTIMONY OF KATHERINE KEYES

10

EXHIBIT

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
			Rx opioids including synthetic: T40.2, T40.3, T40.4			Rx opioids not including synthetic: T40.2, T40.3						All opioids: T40.1, T40.2, T40.3, T40.4*						
2	Year	County	Population	Deaths	Crude Rate	Age Adjusted Rate	Deaths	Crude Rate	Age Adjusted Rate	T40.2-T40.4 minus T40.2 and T40.3 (Deaths that had only T40.4 as a contributing Rx opioid)	% of T40.2-T40.4 deaths that only have T40.4 as contributing Rx opioid	Estimated number of Rx opioid overdose deaths	All deaths due to opioids	Deaths due directly to Rx opioids	Deaths due to non-Rx opioids	Deaths due to non-Rx opioids attributable to Rx opioids	Estimated crude rate of Rx opioid overdose death	*for 2009, deaths have been set to 5, as this is the midpoint in the range of possible suppression values
3	1999	National	279040168	4030	1.444	1.446	3442	1.234	1.219	588	0.145905707	4030					1.444	
4	2000	National	281421906	4400	1.563	1.542	3785	1.345	1.33	615	0.139772727	4400					1.563	
5	2001	National	284968955	5528	1.94	1.922	4770	1.674	1.664	758	0.137120116	5528					1.94	
6	2002	National	287625193	7456	2.592	2.59	6483	2.254	2.253	973	0.130498927	7456					2.592	
7	2003	National	290107933	8517	2.936	2.926	7461	2.572	2.567	1056	0.123987319	8517					2.936	
8	2004	National	292805298	9857	3.366	3.367	8577	2.929	2.931	1280	0.129856954	9857					3.366	
9	2005	National	295516599	10928	3.698	3.679	9612	3.253	3.246	1316	0.120424597	10928					3.698	
10	2006	National	298379912	13723	4.599	4.58	11589	3.884	3.855	2134	0.155505356	13723					4.599	
11	2007	National	301231207	14408	4.783	4.76	12796	4.248	4.239	1612	0.111882288	14408					4.783	
12	2008	National	304093966	14800	4.867	4.842	13149	4.324	4.3	1651	0.111554054	14800					4.867	
13	2009	National	306771529	15597	5.084	5.036	13523	4.408	4.352	2074	0.13297429	15597					5.084	
14	2010	National	308745538	16651	5.393	5.361	14583	4.723	4.702	2068	0.124196745	16651					5.393	
15	2011	National	311591917	16917	5.429	5.416	15140	4.859	4.863	1777	0.105042265	16917					5.429	
16	2012	National	313914040	16007	5.099	5.064	14240	4.536	4.493	1767	0.110389205	16007					5.099	
17	2013	National	316128839	16235	5.136	5.089	14145	4.474	4.418	2090		14411					4.559	
18	2014	National	318857056	18893	5.925	5.905	14838	4.653	4.59	4055		15353					4.815	
19	2015	National	321418820	22598	7.031	7.038	15281	4.754	4.72	7317		16211					5.044	
20	2016	National	323127513	32445	10.041	10.171	17087	5.288	5.246	15358		19039					5.892	
21	2017	National	325719178	40051	12.296	12.49	17029	5.228	5.179	23022		19955					6.126	
22	2018	National	327167434	40893	12.499	12.726	14975	4.577	4.507	25918		18269					5.584	
23	1999	West Virginia	1811799	27	1.49	1.492	15	NA	NA	12	0.444444444	27					1.49	
24	2000	West Virginia	1808344	37	2.046	2.09	30	1.659	1.695	7	0.189189189	37					2.046	
25	2001	West Virginia	1801481	131	7.272	7.445	104	5.773	5.977	27	0.20610687	131					7.272	
26	2002	West Virginia	1805414	169	9.361	9.562	144	7.976	8.162	25	0.147928994	169					9.361	
27	2003	West Virginia	1812295	191	10.539	11.133	165	9.104	9.655	26	0.136125654	191					10.539	
28	2004	West Virginia	1816438	240	13.213	13.622	194	10.68	11.073	46	0.191666667	240					13.213	
29	2005	West Virginia	1820492	137	7.525	7.995	107	5.878	6.215	30	0.218978102	137					7.525	
30	2006	West Virginia	1827912	275	15.044	15.562	242	13.239	13.669	33	0.12	275					15.044	
31	2007	West Virginia	1834052	317	17.284	18.161	257	14.013	14.709	60	0.189274448	317					17.284	
32	2008	West Virginia	1840310	342	18.584	19.327	288	15.65	16.295	54	0.157894737	342					18.584	
33	2009	West Virginia	1847775	158	8.551	8.855	133	7.198	7.451	25	0.158227848	158					8.551	
34	2010	West Virginia	1852994	431	23.26	24.427	378	20.399	21.468	53	0.122969838	431					23.26	
35	2011	West Virginia	1855364	524	28.242	29.993	476	25.655	27.3	48	0.091603053	524					28.242	
36	2012	West Virginia	1855413	431	23.229	24.815	390	21.02	22.479	41	0.09512761	431					23.229	
37	2013	West Virginia	1854304	414	22.326	23.414	368	19.846	20.846	46		376					20.277	
38	2014	West Virginia	1850326	437	23.617	24.663	383	20.699	21.444	54		393					21.24	
39	2015	West Virginia	1844128	512	27.764	28.909	380	20.606	21.188	132		403					21.853	
40	2016	West Virginia	1831102	640	34.952	37.719	340	18.568	19.678	300		393					21.462	
41	2017	West Virginia	1815857	795	43.781	47.155	304	16.741	17.169	491		391					21.533	
42	2018	West Virginia	1805832	681	37.711	41.087	234	12.958	13.136	447		313					17.333	
43	1999	Cabell County, WV	96987	NA	NA	NA	NA	NA	NA	NA		NA					NA	
44	2000	Cabell County, WV	96784	NA	NA	NA	NA	NA	NA	NA		NA					NA	
45	2001	Cabell County, WV	96035	12	NA	NA	NA	NA	NA	NA		12					12.495	
46	2002	Cabell County, WV	95741	15	NA	NA	12	NA	NA	3		15					15.667	
47	2003	Cabell County, WV	95554	15	NA	NA	NA	NA	NA	NA		15					15.698	

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
48	2004	Cabell County, WV	95239	17	NA	NA	13	NA	NA	4		17					17.85		
49	2005	Cabell County, WV	94821	NA	NA	NA	NA	NA	NA	NA		NA					NA		
50	2006	Cabell County, WV	94943	20	21.065	21.504	16	NA	NA	4		20	21	20	1	1	21.065		
51	2007	Cabell County, WV	95059	33	34.715	36.232	28	29.455	30.739	5		33	37	33	4	2	34.715		
52	2008	Cabell County, WV	95209	25	26.258	28.234	19	NA	NA	6		25	25	25	0	0	26.258		
53	2009	Cabell County, WV	96040	NA	NA	NA	NA	NA	NA	NA		NA	5	5	0	0	NA		
54	2010	Cabell County, WV	96319	23	23.879	24.379	23	23.879	24.379	0		23	25	23	2	1	23.879		
55	2011	Cabell County, WV	96653	29	30.004	33.106	26	26.9	29.945	3		29	36	29	7	4	30.004		
56	2012	Cabell County, WV	96974	18	NA	NA	18	NA	NA	0		18	22	18	4	2	18.562		
57	2013	Cabell County, WV	97133	26	26.767	29.733	24	24.708	27.261	2		24	42	24	18	10	24.708		
58	2014	Cabell County, WV	97109	32	32.953	36.773	27	27.804	31.095	5		28	45	28	17	9	28.834		
59	2015	Cabell County, WV	96844	48	49.564	54.777	29	29.945	33.151	19		32	69	32	37	20	33.043		
60	2016	Cabell County, WV	95987	69	71.885	82.521	29	30.212	34.944	40		36	87	36	51	27	37.505		
61	2017	Cabell County, WV	94958	124	130.584	147.851	24	25.274	27.482	100		42	132	42	90	48	44.23		
62	2018	Cabell County, WV	93224	104	111.559	126.316	17	NA	NA	87		32	105	32	73	39	34.326		